

Abstract

The present invention provides a method and apparatus for compressing data of position information such as a road on a digital map in order to realize an accurate transmission of the position information in a small volume of data. A shape vector of an object road segment is resampled, and as this occurs, a sampling point is represented by quantized angle information. By selecting preferably the sampling point and an angle resolution of the quantized angle information, an error in position information can be reduced. For example, in a method for compressing position information by setting appropriately an angle resolution δ which constitutes a quantization unit of an angle, the angle resolution is set according the length of a resampling length L which regulates an interval of resampling, a road shape contained in a digital map is divided into one or a plurality of segments, road shapes in the segments are resampled by a constant resampling length L , and the position of the road shapes is represented by a data string of quantized angle information indicating the position of a sampling point, and data of the data string are variable length coded for transmission. By making the angle resolution δ and the resampling length L interlock with each other, the angle resolution is made small when the resampling length is long, whereas when the resampling length is short, the angle resolution is increased, whereby position information such as road can be transmitted accurately in a small volume of data.